

1 CLAIMS:

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- 3 1. An apparatus for coalescing droplets of one phase
- 4 from a fluid comprising two or more phases, said
- 5 apparatus comprising a chamber (1), a coalescing
- 6 medium (5) comprising a plurality of substantially
- 7 elongate members (30) each having a surface area,
- 8 a retaining member (4, 14) to which the coalescing
- 9 medium (5) is secured, an inlet (21) to said
- 10 chamber, and an outlet (22) from said chamber,
- 11 said inlet and outlet being positioned such that
- 12 fluid flowing from said inlet (21) to said outlet
- 13 (22) flows in a flow direction in contact with
- 14 said surface area of said coalescing medium, the
- 15 elongate members (30) extending substantially in
- 16 the flow direction, characterised in that said
- 17 chamber is formed from a substantially straight
- 18 pipe having a first end and a second end and a
- 19 branch intermediate said first and second ends,
- 20 said outlet (22) being arranged at the first end
- 21 and an access cover (6) being arranged at the
- 22 second end, said inlet (21) being arranged at the
- 23 free end of said branch, wherein said access cover
- 24 is adapted to allow removal and replacement of the
- 25 retaining member (4, 14) and coalescing medium
- 26 (5).
- 27
- 28 2. An apparatus in accordance with Claim 1, wherein
- 29 said retaining member (4, 14) is adapted to be
- 30 removably engaged within said chamber.
- 31
- 32 3. An apparatus in accordance with Claim 1 or Claim
- 33 2, wherein the interior of said chamber is
- 34 provided with a shoulder (7) adapted to engage
- 35 with said retaining member.

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- 1 4. An apparatus in accordance with Claim 3, wherein
2 said access cover (6) is adapted to hold said
3 retaining member (4, 14) against said shoulder (7)
4 when the access cover (6) is attached to the pipe
5 (1).
6
- 7 5. An apparatus in accordance with any of Claims 1 to
8 4, wherein said retaining member (4) is provided
9 with one or more apertures (11) for securing said
10 coalescing medium (5) to said retaining member
11 (4).
12
- 13 6. An apparatus in accordance with any preceding
14 claim, wherein said plurality of elongate members
15 are substantially mutually aligned fibres (30).
16
- 17 7. An apparatus in accordance with Claim 6, wherein
18 said coalescing medium (5) comprises ribbon-like
19 fibres.
20
- 21 8. An apparatus in accordance with Claim 6, wherein
22 said fibres (30) are selected from the group of
23 materials comprising polypropylene, metal wire,
24 animal hair, polyethylene, polyester, and glass
25 wool.
26
- 27 9. An apparatus in accordance with any of Claims 1 to
28 6, wherein said coalescing medium (5) comprises
29 one or more polypropylene ropes.
30
- 31 10. A method for coalescing droplets of one phase from
32 a fluid comprising two or more phases using the
33 apparatus of any preceding Claim, in which the
34 fluid is caused to flow in a flow direction
35 through the chamber (1), each of the plurality of

1 substantially elongate members (30) being
2 substantially aligned in the flow direction, such
3 that the fluid flows in contact with said surface
4 area of said coalescing medium (5) and droplets of
5 a first phase of said fluid coalesce on said
6 surface area.

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8 11. A method in accordance with Claim 10, wherein the
9 fluid is a liquid.

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11 12. A method in accordance with Claim 11, wherein the
12 fluid is a mixture of water and oil, and wherein
13 the first phase is oil.

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